# MAJESTIC VIEW SERVICE AREA (PWSNO 1280256) SOURCE WATER ASSESSMENT REPORT

July 31, 2001



# State of Idaho Department of Environmental Quality

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# **Executive Summary**

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for Majestic View Service Area*, describes the public drinking water wells; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.** 

Majestic View Service Area drinking water is supplied by a well field pumping from the Rathdrum Prairie Aquifer. The water system serves a population of about 168 people in Pleasant View area west of Post Falls, Idaho. The City of Post Falls owns and operates the system. A ground water Susceptibility Analysis conducted by the Idaho Department of Environmental Quality June 26, 2001 found the wells to be at moderate risk for contamination from all classes of regulated contaminants, mostly because factors associated with the local geology.

This assessment should be used as a basis for determining appropriate new protection measures or reevaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For source water protection in its own jurisdiction, Majestic View Service Area should continue its excellent maintenance and operations program. The city should promote ground water protection education through the schools and civic organizations. A wealth of material about source water protection is available on the Internet. The U.S. Environmental Protection Agency, Idaho Department of Environmental Quality and the American Water Works Association websites are good places to begin looking for case studies, example ordinances or educational materials that can be adapted to meet local circumstances.

Because 186 public water systems in Idaho draw water from the Rathdrum Prairie Aquifer, they should consider forming a regional group to represent their interests before state, county and municipal governing bodies when regulatory tools like zoning overlays, or enactment of building codes are the most appropriate ground water protection measures. Partnerships with state and local agencies and industry groups should also be established.

Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. For assistance in developing protection strategies, please contact your regional Department of Environmental Quality office or the Idaho Rural Water Association.

#### SOURCE WATER ASSESSMENT FOR MAJESTIC VIEW SERVICE AREA

#### Section 1. Introduction - Basis for Assessment

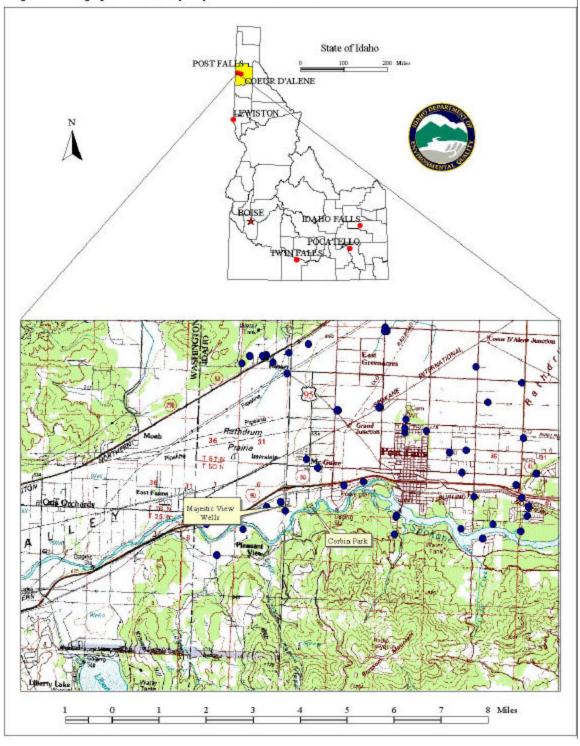
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water susceptibility analysis worksheets used to develop this assessment are attached.

## Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system. The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Majestic View Service Area



# **Section 2. Preparing for the Assessment**

## **Defining the Zones of Contribution - Delineation**

The delineation process establishes the physical area around a well that will become the focal point of the source water assessment. The process includes mapping the boundaries of the well recharge area into time of travel (TOT) zones indicating the number of years necessary for a particle of water to reach a well. DEQ used a refined computer model approved by the EPA to determine the time of travel for water pumped by public water systems from the Rathdrum Prairie Aquifer. The computer model used data assimilated by DEQ from a variety of sources including local well logs.

Majestic View Service Area serves a population of approximately 168 people located in the Pleasant View area west of Post Falls, Idaho (Figure 1). The City of Post Falls owns and operates the drinking water system. Drinking water for Majestic View Service Area customers is supplied by three wells. Wells #1 and #2 each have an estimated capacity of 400 GPM. Well #3 with a 1500 GPM capacity is primarily for fire protection, but can be used as a back up for domestic use since it is interconnected with the potable water distribution system.

The delineation for the well field is an ellipse about a quarter of a mile long stretching eastward from the well field. It encompasses about 6 acres. The estimated time of travel from the aquifer recharge boundary at the Spokane River to the well field is 1 year or less.

#### **Identifying Potential Sources of Contamination**

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within the Majestic View Service Area source water assessment areas through the use of computer databases and Geographic Information System maps developed by DEQ. The second, or enhanced, phase of the contaminant inventory involved contacting the operator to validate the sources identified in phase one and to add any additional potential sources in the area. This task was undertaken with the assistance of Terry Werner of the Post Falls Water Department.

Figure 2, *Majestic View Service Area Delineation and Potential Contaminant Inventory* on page 7 of this report shows the locations of the Majestic View Service Area wells, the zone of contribution DEQ delineated for the wells, and approximate locations of potential contaminant sites. Sites inside the delineations are numbered to correspond to additional information summarized on Table 2 (page 8).

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the <u>potential</u> for contamination exists due to the nature of the business, industry, or operation.

# **Section 3. Susceptibility Analysis**

The susceptibility of the Majestic View Service Area wells to contamination was assessed on the following factors:

- physical integrity of the wells,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The Susceptibility Analysis Worksheets, Attachment A, show in detail how each well scored.

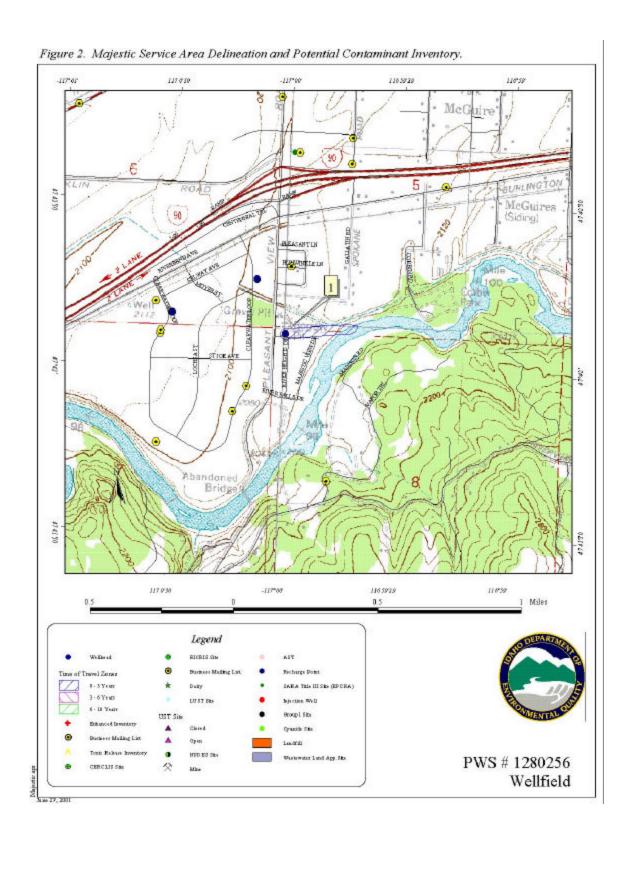
#### **Well Construction**

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent Sanitary Survey of the public water system. Well logs for all three wells are on file with DEQ. The last Sanitary Survey of the system was conducted in the winter of 2000.

Except for minor differences in the casing wall thickness, Wells #1 and #2 meet current Idaho Department of Water Resources standards. The casing depth for Well #3, 18 feet, is less than the 20-foot depth required for public water supply wells in unconsolidated formations. Points were marked against all the wells because the casings and seals terminate in permeable soil strata typical of the Rathdrum Prairie Aquifer. The static water level in the wells is 110 feet below the ground surface. Table 1 summarizes construction and site characteristics for each well. The system was commended for excellent maintenance and operation when it was inspected in February 2000.

Table 1. Selected Construction Characteristics of Majestic View Service Area Wells.

Well	Total Depth (ft.)	Depth of Surface Seal (ft)	Depth of Casing (ft)	Well Screen Depth Range (ft)	Static Water Level (ft
Well #1	170	20	160	160/170	110
Well #2	170	20	160	160/170	110
Well #3	196	18	166	166/196	110



### **Hydrologic Sensitivity**

Hydrologic sensitivity scores reflect natural geologic conditions at the well sites and in the recharge zone. Information for this part of the analysis is derived from individual well logs and from the soils drainage classification for the recharge zone. All of the Majestic View Service Area wells scored 6 points out of 6 points possible in this portion of the Susceptibility Analysis. The first water bearing stratum reported for Wells #1 and #2 is from 71 ro170 feet. Water was encountered between 80 and 196 feet in Well #3. This relatively shallow water table provides less protection from potential contaminants through adsorption and other mechanisms than a deeper water table. Soils above the water table are composed of sand, gravel and cobbles or boulders. There is no clay layer to retard the vertical transport of contaminants.

#### **Potential Contaminant Sources and Land Use**

The Majestic View Service Area well field recharge zone is in a low-density residential area. Homes in the area are on individual septic systems.

A borrow pit that was apparently used as a landfill is the only documented potential contaminant site inside the delineation boundary. A site inspection and water system records review in May, 1995 determined that the wells are not directly influenced by the Spokane River. Figure 2, *Majestic View Service Area Potential Contaminant Inventory* shows the well field location, the recharge zone delineation and the approximate location of the borrow pit relative to the wells. Table 2 lists contaminants of concern that may be associated with landfills. The landfill was not counted as a potential source of microbial contaminants in the susceptibility analysis because it has not been in active used since the 1970s.

Table 2. Majestic View Service Area Potential Contaminant Inventory.

MAP ID	SITE DESCRIPTION	SOURCE OF	POTENTIAL CONTAMINANTS <sup>1</sup>
NUMBER		INFORMATION	
1	Borrow Pit/Landfill	Public Water System File,	IOC, SOC, VOC, Microbial
		Enhanced Inventory	

<sup>&</sup>lt;sup>1</sup> IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

## **Historic Water Quality**

Dalapon, an herbicide, and Di (2-ethylhexyl) phthalate, a plasticizer, were detected a sample from the wellfield tested in March 1993. The concentration of Dalapon was  $10\,\mu\text{g/l}$ . The Maximum Contaminant Level (MCL) for the chemical is  $200\,\mu\text{g/l}$ . The concentration of Di (2-ethylhexyl) phthalate (MCL =  $6.0\,\mu\text{g/l}$ ) was  $4.5\,\mu\text{g/l}$ . Neither chemical was present in a sample tested in May 1993. Low concentrations (29.8  $\mu\text{g/l}$  and 2.3  $\mu\text{g/l}$ ) of Di (2-ethylhexyl) adipate (MCL =  $400\,\mu\text{g/l}$ ), another plasticizer, were detected in samples tested in May and June 1993. The chemical was not present in a sample tested in 1997. Testing waivers for synthetic organic compounds were granted for 1996 and 1999. The presence of any man-made chemical in drinking water samples usually results in an automatic high susceptibility ranking. In this case however, the DEQ staff thinks a moderate rating is more appropriate because the chemicals in question are not persistently present, and monitoring waivers were granted.

Volatile organic compounds have never been detected in the wells. Radiological contaminants in concentrations far below MCL have been present since testing began. Barium (.0146 mg/l) and chromium (0.0032 MG/L) were detected in the initial water sample tested when the wells were drilled. The MCL for barium is 2.0 mg/l and for chromium is 0.10 mg/l. Nitrate levels have ranged between undetectable amounts and 1.58 mg/l since 1993. The MCL for Nitrate is 10 mg/l. Only two distribution samples have tested positive for Total Coliform bacteria since monthly tracking started in 1994. The system does not chlorinate its water. Sodium carbonate is used to treat the water to prevent leaching of lead and copper from distribution system components.

### **Final Susceptibility Ranking**

The Majestic View Service Area wellfield ranked moderately susceptible to all classes of regulated contaminants mostly because of naturally occurring risk factors associated with the geology of the Rathdrum Prairie Aquifer. Cumulative scores for each well are summarized on Table 3. A complete susceptibility analysis worksheet for each well can be found in Attachment A.

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

The final ranking categories are as follows:

- 0 5 Low Susceptibility
- 6 12 Moderate Susceptibility
- > 13 High Susceptibility

Table 3. Summary of Majestic View Service Area Susceptibility Evaluation

Susceptibility Scores								
	System	Hydrologic	Contaminant Inventory					
	Construction	Sensitivity	IOC	VOC	SOC	Microbial		
Well #1	3	6	5	5	5	2		
Well #2	3	6	5	5	5	2		
Well #3	4	6	5	5 5		2		
	Final Susceptibility Ranking							
IOC V			VOC		Microbial			
Well #1	Moderat	e M	Moderate		oderate	Moderate		
Well #2	Moderat	e N	Ioderate	Mo	oderate	Moderate		
Well #3	Moderat	e N	Ioderate	Mo	oderate	Moderate		

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

HIGH\* - Indicates source automatically scored as high susceptibility due to presence of a VOCor SOC; bacteria persistently present in well tap samples; or an IOC above the maximum contaminant level in the tested drinking water

# **Section 4. Options for Source Water Protection**

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. The state and local health districts have instituted enhanced protection of the ground water in the Rathdrum Prairie Aquifer because of its high use and uniquely pristine water quality. The protections are generally aquifer wide and are not aimed at zones of contribution to a specific well or water system. *The Spokane Valley-Rathdrum Prairie Atlas*, sent to water systems on the prairie when they were invited to perform an enhanced contaminant inventory, describes some of the regional protection measures.

The 186 public water systems in Idaho that draw water from the Rathdrum Prairie Aquifer should consider forming a regional group to represent their interests before state, county and municipal governing bodies when regulatory tools like zoning overlays, or enactment of building codes are the most appropriate ground water protection measures. These types of measures could be used to protect the capture zones of a specific system or group of wells that could be put at risk from local land use changes. Partnerships with state and local agencies and industry groups should also be established. For instance, source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, local Soil Conservation District, and the Natural Resources Conservation Service.

For source water protection in its own jurisdiction, Majestic View Service Area should continue its excellent maintenance and operations program. The city should promote ground water protection education through the schools and civic organizations. A wealth of material about source water protection is available on the Internet. The U.S. Environmental Protection Agency, Idaho Department of Environmental Quality and the American Water Works Association websites are good places to begin looking for case studies, example ordinances or educational materials that can be adapted to meet local circumstances.

Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

### Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: <a href="http://www.deq.state.id.us">http://www.deq.state.id.us</a>

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at (208) 343-7001 for assistance with wellhead protection strategies.

#### **References Cited**

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Agriculture, 1998. Unpublished Data.

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Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Natural Resource Conservation Service, 1991. Idaho Snake-Payette Rivers Hydrologic Unit Plan of Work. March 1991.

United States Geological Survey, 1986. Quality of Ground Water in the Payette River Basin, Idaho. United States Geological Survey. Water Resources Investigation Report 86-4013.

University of Idaho. 1986. Ground Water Resources in a Portion of Payette County, Idaho. Idaho Water Resources Research Institute. University of Idaho. Moscow, Idaho. April 1986.

# Attachment A

Majestic View Service Area Susceptibility Analysis Worksheets

### **Ground Water Susceptibility**

Public Water System Name :	MAJESTIC VIEW SERVI	ICE AREA	Source:	WELL 1			
Public Water System Number :	1280256		6/27/01 11:	11:17 AM			
1. System Construction				SCORE			
Drill Date		9/8/92					
Driller Log Available		YES					
Sanitary Survey (if yes, indicate date	of last survey)	YES	2000				
Well meets IDWR construction stand	ards	YES		0			
Wellhead and surface seal maintained		YES		0			
Casing and annular seal extend to low	permeability unit	NO		2			
Highest production 100 feet below sta	tic water level	NO		1			
Well located outside the 100 year floo	od plain	YES		0			
Total System Construction Score				3			
2. Hydrologic Sensitivity							
Soils are poorly to moderately drained	I	NO		2			
Vadose zone composed of gravel, frac	tured rock or unknown	YES		1			
Depth to first water > 300 feet		NO		1			
Aquitard present with > 50 feet cumu	ative thickness	NO		2			
Total Hydrologic Score				6			
				IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Us	se - ZONE 1A (Sanitary Setba	ck)		Score	Score	Score	Score
Land Use Zone 1A		RURAL RE	SIDENTIAL	2	2	2	2
Farm chemical use high		NO		0	0	0	
IOC, VOC, SOC, or Microbial source	es in Zone 1A	YES		NO	NO	NO	NO
Total Potential Contaminant Source/Lo	and Use Score - Zone 1A			2	2	2	2
Potential Contaminant / Land Use	- ZONE 1B ( 3 YR. TOT)						
Contaminant sources present (Number	of Sources)	YES		1	1	1	0
(Score = # Sources X 2 ) 8 Points M	aximum			2	2	2	0
Sources of Class II or III leacheable c	ontaminants or Microbials	YES		1	1	1	
4 Points Maximum				1	1	1	
Zone 1B contains or intercepts a Grou	p 1 Area	NO		0	0	0	0
Land use Zone 1B		Less Than 2:	5% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / L	and Use Score - Zone 1B			3	3	3	0
Potential Contaminant / Land Use	- ZONE II (6 YR. TOT)						
Contaminant Sources Present		NA		0	0	0	
Sources of Class II or III leacheable c	ontaminants or Microbials	NA		0	0	0	
Land Use Zone II				0	0	0	
Potential Contaminant Source / Land U	se Score - Zone II			0	0	0	0
Potential Contaminant / Land Use	- ZONE III (10 YR. TOT)						
Contaminant Source Present		NA		0	0	0	
Sources of Class II or III leacheable c	ontaminants or Microbials	NA		0	0	0	
Is there irrigated agricultural lands that	t occupy > 50% of Zone	NA		0	0	0	
Total Potential Contaminant Source / L	and Use Score - Zone III			0	0	0	0
Cumulative Potential Contaminant	/ Land Use Score			5	5	5	2
4. Final Susceptibility Source Score	2			10	10	10	10
5. Final Well Ranking				Moderate	Moderate	Moderate	Moderate

#### **Ground Water Susceptibility**

Ground water Suscepting	Dinty						
Public Water System Name :	MAJESTIC VIEW SERVICE	CE AREA	Source: W	ELL 2			
Public Water System Number :	1280256		6/27/01 11:11:	36 AM			
1. System Construction				SCORE			
Drill Date		10/1/92					
Driller Log Available		YES					
Sanitary Survey (if yes, indicate date of	of last survey)	YES		200			
Well meets IDWR construction standa	ards	YES		Ô			
Wellhead and surface seal maintained		YES		0			
Casing and annular seal extend to low	permeability unit	NO		2			
Highest production 100 feet below stat	tic water level	NO		1			
Well located outside the 100 year floo	d plain	YES		0			
Total System Construction Score				3			
2. Hydrologic Sensitivity							
Soils are poorly to moderately drained	1	NO		2			
Vadose zone composed of gravel, fract	ured rock or unknown	YES		1			
Depth to first water > 300 feet		NO		1			
Aquitard present with > 50 feet cumul	ative thickness	NO		2			
Total Hydrologic Score				6			
, 0				IOC	VOC	SOC	Microbia
3. Potential Contaminant / Land Us	a - ZONE 14 (Sanitary Sethac)	k)		Score	Score	Score	Score
Land Use Zone 1A	ic - ZONE IA (Sanitary Setbac)	RURAL RESIDENTIA	AT.	2	2	2	2
Farm chemical use high		NO	L	0	0	0	-
IOC, VOC, SOC, or Microbial source	e in Zona 1A	YES		NO	NO	NO	NO
Total Potential Contaminant Source/La		TES		2	2	2	2
Potential Contaminant / Land Use							
Contaminant sources present (Number		YES		1	1	1	0
(Score = # Sources X 2 ) 8 Points Ma		113		2	2	2	0
		YES		1	1	1	Ü
Sources of Class II or III leacheable co	ontaminants of Microbiais	IES					
4 Points Maximum		NO		1	1	1	0
Zone 1B contains or intercepts a Group	p I Area	NO		0	0	0	0
Land use Zone 1B	111 C 7 1D	Less Than 25% Agricu	Itural Land	0	0	0	0
Total Potential Contaminant Source / L				3	3	3	0
Potential Contaminant / Land Use	- ZONE II (6 YR. TOT)						
Contaminant Sources Present		NA		0	0	0	
Sources of Class II or III leacheable co	ontaminants or Microbials	NA		0	0	0	
Land Use Zone II				0	0	0	
Potential Contaminant Source / Land Us				0	0	0	0
D 4 41 1 G 4 1 4 4 T 1 TT	se score - Zone II			U			
	- ZONE III (10 YR. TOT)						
Contaminant Source Present	- ZONE III (10 YR. TOT)	NA		0	0	0	
	- ZONE III (10 YR. TOT)	NA NA				0	
Contaminant Source Present	- ZONE III (10 YR. TOT) ontaminants or Microbials			0	0		
Contaminant Source Present Sources of Class II or III leacheable co	ontaminants or Microbials t occupy > 50% of Zone	NA		0	0	0	0
Contaminant Source Present  Sources of Class II or III leacheable co Is there irrigated agricultural lands tha	ontaminants or Microbials t occupy > 50% of Zone and Use Score - Zone III	NA		0 0 0	0 0 0	0	0 2
Contaminant Source Present  Sources of Class II or III leacheable co Is there irrigated agricultural lands tha  Total Potential Contaminant Source / Le	ontaminants or Microbials t occupy > 50% of Zone and Use Score - Zone III / Land Use Score	NA		0 0 0	0 0 0	0 0 <b>0</b>	

#### **Ground Water Susceptibility**

 Public Water System Name :
 MAJESTIC VIEW SERVICE AREA
 Source:
 WELL 3

 Public Water System Number :
 1280256
 6/27/01 11:19:22 AM

Public Water System Number : 1280256	6/27/01 11:1	9:22 AM			
1. System Construction		SCORE			
Drill Date	10/1/92				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	200			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
		IOC	VOC	SOC	Microbia
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setbacl	()	Score	Score	Score	Score
Land Use Zone 1A	RURAL RESIDENTIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B ( 3 YR. TOT)					
Contaminant sources present (Number of Sources)	YES	1	1	1	0
(Score = # Sources X 2 ) 8 Points Maximum		2	2	2	0
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B	_	3	3	3	0
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NA	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NA	0	0	0	
Land Use Zone II		0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NA	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NA	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NA	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		5	5	5	2
4. Final Susceptibility Source Score		11	11	11	11
5. Final Well Ranking					
v. i iliai weli nalikiliy		Moderate	Moderate	woderate	wouela

# POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

<u>AST (Aboveground Storage Tanks)</u> – Sites with aboveground storage tanks.

<u>Business Mailing List</u> – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

<u>CERCLIS</u> – This includes sites considered for listing under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

<u>Cyanide Site</u> – DEQ permitted and known historical sites/facilities using cyanide.

<u>Dairy</u> – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

<u>Deep Injection Well</u> – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

**Enhanced Inventory** – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

**Floodplain** – This is a coverage of the 100year floodplains.

<u>Group 1 Sites</u> – These are sites that show elevated levels of contaminants and are not within the priority one areas.

<u>Inorganic Priority Area</u> – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

<u>Landfill</u> – Areas of open and closed municipal and non-municipal landfills.

<u>LUST (Leaking Underground Storage Tank)</u> – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

<u>Mines and Quarries</u> – Mines and quarries permitted through the Idaho Department of Lands.)

<u>Nitrate Priority Area</u> – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

#### NPDES (National Pollutant Discharge Elimination System)

- Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

<u>Organic Priority Areas</u> – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

<u>Recharge Point</u> – This includes active, proposed, and possible recharge sites on the Snake River Plain.

**RICRIS** – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

<u>UST (Underground Storage Tank)</u> – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

<u>Wastewater Land Applications Sites</u> – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

<u>Wellheads</u> – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

**NOTE:** Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.